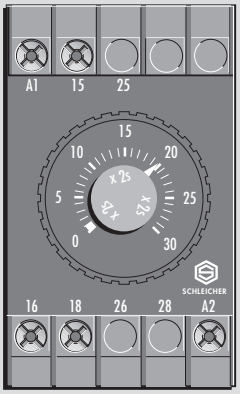
Electromechanical Time Relay

SZM 51 for single voltage

Function: ON-delay (AV)
1 time range
Contact equipment: 1 timed changeover

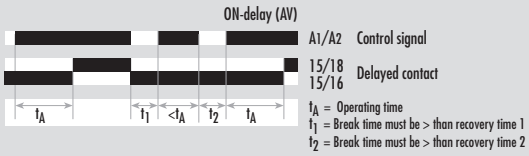
SZM 51



Function Diagram

FD 0032

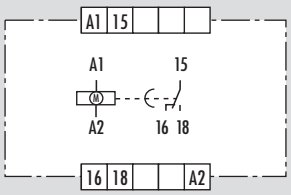
SZM 51



Connection Diagram

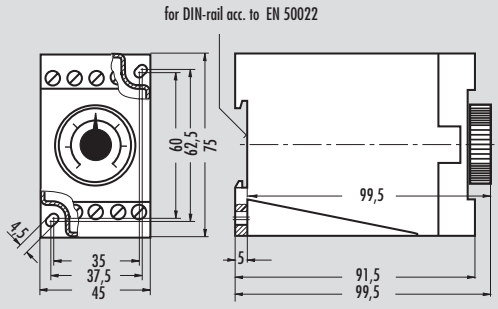
KS 5148/2

SZM 51



Dimensions

S 3-12



General

AV (see page S 1/3).

Infinitely variable time setting within a range is carried out with the aid of a transparent rotary knob.

The time-remaining indicator moves during operation from the set time in the direction of zero.

Function

Upon application of the supply voltage and elapsing of the preselected delay time, the contact is actuated.
Upon de-energization, the sliding armature is decoupled from the gear train and the contact reverts to its off-position. A torsion spring resets the timing gear to zero.

Note

- Re-energization during the reset movement has to be avoided.
- The mounting position of the SMZ 51can only be on a vertical flat face or with a maximum inclination of 15 °.

Product Description

The electromechanical time relay SZM 51 has a single setting range and is available in the following time ranges:

Time Range at 50 Hz rated frequency	at 60 Hz rated frequency
0,4 to 10 s	0,4 to 8 s
1 to 30 s	1 to 25 s
2 to 60 s	2 to 50 s

Type		Standard voltage	Special voltage	**Price Code**
SZM 51	10 s	24 V AC 110 to 115 V AC 230 V AC 50 or 60 Hz	42 V AC 48 V AC 120 to 127 V AC 240 V AC 50 or 60 Hz	**S 1/39.1**
SZM 51	30 s			
SZM 51	60 s			

Accessories

Cover Z 29 (sealable transparent cover)

Price code for accessories (see page S 1/72).

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TECHNICAL DATA

SZM 51

FUNCTION according to DIN VDE 0435 Part 110:04.89		Electromechanical time relay for single voltage
	Point 3.12	ON-delay time relay
Function display		Pointer for operating time
Function diagram		FD 0032
POWER SUPPLY		
Rated voltage U_N	V AC	**24 | 42 | 48 | 110-115 | 120-125 | 230 | 240**
Rated consumption: motor at 50 Hz and U_N (AC)	VA	ca. 3,3
Rated consumption: motor at 50 Hz and U_N (AC)	W	ca. 2,2
Rated consumption: coil at 50 Hz and U_N (AC)	VA	–
Rated consumption: coil at 50 Hz and U_N (AC)	W	–
Rated frequency	Hz	50 or 60
Operating voltage range		0,8 to 1,1 x U_N
TIME CIRCUIT		
Time setting/Number of time ranges		analog/1
Available time ranges at 50 Hz/60 Hz	s	0,4 to 10; / 0,4 to 8
	s	1,0 to 30; / 1,0 to 25
	s	2,0 to 60 / 2,0 to 50
Recovery time		≤ 4 % of the operating time
Minimum switch-ON time	ms	–
Release value	% U_N	≥ 15
Permissible parallel load		yes
Internal rectifier		-
Average of the error related to the full-scale value		at standard duty: Setting range 30 s; ± 4 % Setting range 60 s; ± 4 Setting range 10 s; ± 6 %
Dispersion related to the full-scale value	%	± 1
OUTPUT CIRCUIT		
Contact equipment		1 timed changeover
Contact material		Ag Cu
Available modifications		Ag Pd 70/30* or Au Ni 5*
Switching voltage U_n	V AC/DC	230/230
Maximum continuous current I_n	A	5
Application category according to EN 60947–5–1:1991		AC–15 U_e 230 V AC, I_e 2 A DC–13 U_e 24 V DC, I_e 2 A
Permissible switching frequency	switching cycles/h	1200
Mechanical service life	switching cycles	5 x 10^6 or 10^4 motor operations
Response time	ms	-
Release time	ms	≤ 200 at full scale 10 s and 30 s ≤ 300 at full scale 60 s
GENERAL DATA		
Creepage and clearance distances between circuits according to DIN VDE 0110-1:04.97: rated surge voltage	kV	4
Over voltage category		III
Contamination level		3 outside, 2 inside
Design voltage	V AC	250
Test voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1	kV	2,21
Protection class housing/terminals acc. to DIN VDE 0470 Sec. 1:11.92		IP 30/IP 20
Radiated noise		EN 50081–1:03.93, –2:03.94
Noise immunity		EN 50082–2:1995
Ambient temperature, working range	°C	- 10 to + 45
Dimensions		S 3–12
Connection diagram		KS 5148/2
Weight	kg	0,2
Accessories		cover Z 29
Approvals		page i.4
GENERAL TECHNICAL SPECIFICATIONS		page i.5

*) Price: upon request